Status of The Department of Housing and Urban Development s Year 2000 Efforts:
Quarterly Progress Report for August 1998

I. Overall Progress. Provide a report of the status of the agency efforts to address the year 2000 problem, which includes an agency-wide status of the total number of mission-critical systems.

RESPONSE: HUD bases its progress reporting on quarterly goals for certification that the Department established in February 1997. These goals were formulated on the premise that HUD was beginning early enough, had the necessary levels of skilled personnel and resources, and had a plan of sufficient scope and detail, and that therefore all of its systems would be made compliant well in advance of the next century. That is, renovation would be complete by September 30, 1998; certification by January 31, 1999; and implementation by March 31, 1999. There is nothing to indicate that HUD will not make this schedule.

During the last quarter, HUD completed renovation work on fourteen (14) mission-critical systems, and certified nine (9) mission-critical systems Year 2000 compliant. Included in those certifications are the Tenant Rental Assistance Certification System (TRACS), system code F87 with over 2.5 million lines of code, the second largest system in HUD s inventory and the HUD Central Accounting & Program System (HUDCAPS), system code A75, one of the Department s key financial systems. Both TRACS and HUDCAPS were among the ten systems being renovated and certified in phases (see response to question **II.b.**).

*Total Number of Mission-Critical Systems	Number Compliant	Number To Be Replaced	Number To Be Repaired	Number To Be Retired
62	37	7	17	1

*** For this table, the four right-hand columns (Number compliant, Number to be Replaced, Number to be Repaired, and Number to be Retired) must add up to the left hand column (Total Number of Mission-Critical Systems). Over time, as systems are implemented, the Number to be Repaired and Number to be Replaced will decline, while the Number Compliant will increase by the same amounts. Ultimately, the Total Number of Mission-Critical Systems will be equal to Number Compliant. Similarly, the Number to be Retired will also decline as systems are actually retired. As this occurs, the Total Number of Mission-Critical systems will also decline, in order to accurately reflect the total number of mission-critical systems left. Although the Total Number of Mission-Critical Systems should be fairly stable at this time, [HUD will] adjust this number, as well as the number in the relevant column on the right, as necessary, in order to reflect the identity of new systems or determinations that systems are not mission-critical. Any significant changes to the Total Number of Systems [will] be explained in a footnote.**

The total number of mission-critical systems reported in this chart has been reduced by one since the May report. Youthbuild, system code C02, had its disposition changed from "To Be Renovated" to "Being Built Complaint." Office of Management and Budget (OMB) reporting guidelines exclude systems being built compliant, therefore the system was removed from the total count. A detailed explanation of this and the other disposition changes is found below.

Since the Department's May report, changes to the dispositions of eight mission-critical systems were approved by HUD management in order to maintain accurate tracking and reporting. Those changes are detailed below:

- The Pool Transfer System (PTS), system code B11, Maintenance System (MAINT), system code B17, and New Issuer System (NIS), system code B20, had their dispositions changed from "Phase Out With Replacement," to "To Be Renovated." These changes were made because all three systems had reached the "Point of No Return" date in their schedules, causing the tracking mechanisms to trigger a contingency plan. The "Point of No Return" date, a term internal to HUD IT, appears in the Status 2000 database as the "Last Date that a Contingency Plan could be Started and Successfully Completed." Such a date was determined for each replacement situation during the Assessment Phase. It is based on the estimated failure date of the system being replaced in relation to the time necessary to successfully undertake and complete the contingency plan. The contingency plan in all three cases was the renovation of the existing system. MAINT renovation was completed on June 15, 1998, and it was certified Year 2000 compliant on June 18. NIS renovation was completed on July 31, 1998, and it is scheduled to be certified by August 28. PTS is scheduled to complete renovation on September 8, 1998, and to be certified by September 30.

- The disposition of the Multifamily Data Warehouse (MDW), system code F45, was changed from "Phase Out With Replacement" to "Phase Out With No Replacement (i.e., To Be Retired)." This change was made because the program area which owns the system, the Office of Housing, reevaluated its original needs assessment and determined that the function carried out by MDW was obsolete. The system is scheduled to be deactivated by September 30, 1998.

- Youthbuild, system code C02, was previously under the disposition "To Be Renovated." However, the program area which owns Youthbuild, the Office of Community Planning and Development, added a number of new functional requirements for the system. Because of these added requirements, HUD management determined it would be more time and cost effective to build a new system that was Year 2000 compliant, rather than to renovate the existing system and then add the new functionality. The disposition of Youthbuild was therefore changed to "Being Built Compliant," and was removed from the tables in questions **I** and **II.a**. The "new" Youthbuild was certified Year 2000 compliant on July 1, 1998.

- Two mission-critical systems with disposition changes share a set of rather unique circumstances. The Grants Evaluation Management System (GEMS), system code E20, and the Public and Indian Housing Integrated Business System (PIH IBS), system code N31, are both cross-platform systems which utilize the Hitachi mainframe, LAN, and PC environments to perform their business functions. The vast majority of the functionality of both systems is contained in modules which are compliant in their existing form, hence their original disposition of "Already Compliant." However, non-compliant elements requiring renovation existed in each system. Because renovation work has been necessary and its progress tracked, management reconsidered the dispositions of both systems and changed them to "To Be Renovated." Renovation work on PIH IBS, which is being renovated and certified in phases (see the response to Question **II.b**.), was actually completed on June 26, 1998, prior to its disposition being officially changed. PIH IBS is scheduled to be certified compliant by

September 25, 1998. GEMS renovation was completed on August 10, 1998, and it is scheduled to be certified compliant by August 28.

- The remaining disposition change was made to correct an earlier oversight by HUD management regarding a system's compliance status. The Single Family Acquired Asset Management System (SAMS), system code A80S, was declared to be "Already Compliant" during its Assessment Phase. It received that disposition because the basic, Commercial Off-the-Shelf (COTS) system had been compliant when purchased by HUD. The pre-certification process revealed that the modifications made to the system by the Department had made the system non-compliant. The error was not discovered until after the May 1998 quarterly report had been issued. SAMS is now under the correct disposition "Existing System, To Be Renovated." The renovation work was completed on June 2, 1998, and SAMS is expected to be certified Year 2000 compliant by August 31, 1998.

II. <u>Progress of Systems Under Repair</u>. Provide a report of the status of agency efforts to address the year 2000 problem which includes the status of mission-critical systems under repair.

a. In the first row, indicate the dates your agency has set for completing each phase. In each report, restate these dates and indicate if there has been a change. In the second row, under Total Number of Systems, indicate the baseline number of mission-critical systems that *have been* or *will be* repaired. Footnote and explain any changes to this number. Also in the second row, present the number of mission-critical systems that have completed each phase of assessment, renovation, validation, and implementation.

RESPONSE:

	Total Number of Mission-Critical Systems Being Repaired	Assessment	Renovation	Certification (Validation)	Implementation
Milestones		June 1997 3rd Qtr FY 1997	Sept. 30, 1998 4th Qtr FY 1998	Jan. 31, 1999 2nd Qtr FY 1999	March 31, 1999 2nd Qtr FY 1999
Current Number Complete	40	40	32	23	16

Since the Department's May report, the total number of mission-critical systems increased from 35 to 40 systems. This increase is due to changes in the dispositions of eight mission-critical systems, which were approved by HUD management in order to maintain accurate tracking and reporting. Those changes are detailed below:

- The Pool Transfer System (PTS), system code B11, Maintenance System (MAINT), system code B17, and New Issuer System (NIS), system code B20, had their dispositions changed from "Phase Out With Replacement," to "To Be Renovated." These changes were made because all three systems had reached the "Point of No Return" date in their schedules, causing the tracking mechanisms to trigger a contingency plan. The "Point of No Return" date, a term internal to HUD IT, appears in the Status 2000 database as the "Last Date that a Contingency Plan could be Started and Successfully Completed." Such a date was determined for each replacement situation during the Assessment Phase. It is based on the estimated failure date of the system being replaced in relation to the time necessary to successfully undertake and complete the contingency plan. The contingency plan in all three cases was the renovation of the existing system. MAINT renovation was

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b. Provide a description of progress in fixing or replacing mission-critical systems.

RESPONSE: Many of HUD s largest and most complex systems are also mission-critical systems. In keeping with common industry practice, these

systems are undergoing renovation and certification in **phases**. A phase is defined as a clearly identified, self-contained function, capable of being renovated and tested independently from the rest of the application. Using the phased approach, the entire system can be counted as having completed a milestone (such as renovation) only when *every* phase of the system has successfully completed the milestone, even if a majority of phases are finished.

On April 1, 1998, all development work other than Year 2000 renovation was suspended for the five large, mission-critical systems shaded in the table below. These systems are among the most complex in the active inventory, and, even within the mission-critical framework, their functionality is considered to be core to the ongoing operation of HUD. The suspension will ensure that development teams for those systems are able to focus entirely on Year 2000 priorities, and will remain in place until those priorities are satisfactorily accomplished.

The table below demonstrates the progress made toward completion of ten large, mission-critical systems being renovated and certified by phases:

System Code	System Name & Acronym	Lines of Code	Total Phases	Renovation	Certification*
A43I	Single Family Insurance System (SFIS)	1,158,617	8	6 completed 2 underway	1 completed *Final Cert. Due: 11/3/98*
A43C	Single Family Insurance System -Claims Subsystem (Claims)	457,957	16	14 completed 2 underway	*Final Cert. Due: 10/27/98*
A67	Line of Credit Control System (LOCCS)	600,000	18/1**	14 completed 4 underway	*Final Certification Due: 11/30/98*
A75	HUD Central Accounting & Program System (HUDCAPS)	1,212,608	2	Both completed	Both completed *Certified 7/31/98*
A80Q	Public Inquiry Communication Subsystem (PICS)	1,687,002	7	2 completed 5 underway	2 completed *Final Cert. Due: 9/30/98*
A96	Program Accounting System (PAS)	600,000	17	All completed	Starting process *Final Cert. Due: 12/30/98*
F17	Computerized Homes	618,210	5	3 completed	2 completed

	Underwriting Management System (CHUMS)			2 underway	*Final Cert. Due: 12/18/98*
F51	Institution Master File (IMF)	1,667,667	3	2 completed 1 underway	1 completed *Final Cert. Due: 9/15/98*
F87	Tenant Rental Assistance Certification System (TRACS)	2,551,776	2	Both completed	Both completed *Certified 7/15/98*
N31	Integrated Business System (IBS)	1,627,319	2	Both completed	Starting process *Final Cert. Due: 9/15/98*

*Several systems may be certified in fewer phases than the number they are renovated in, with modules of related function undergoing certification testing together.

**LOCCS is renovating in 18 phases, but is undergoing certification as a whole system.

In the Department s May report, two systems were listed as having certification dates beyond the January 31, 1999, deadline; however, HUD has been able to reschedule them to meet this deadline. Title 1 Notes Servicing (Debt Management Collection System - DMCS), system code F71, and the Generic Debt Management System (GDEBT), system code F71A, are both mission-critical systems serving the Housing program area, as well as being COTS packages provided by the same software vendor. The systems were previously estimated to complete certification on February 12, 1999, a date based on the schedule given to HUD by the vendor. However, recent negotiations between the Department and the vendor have produced an agreement that new, compliant versions of these systems will be delivered to HUD in time to conduct certification testing and meet the deadline of January 31, 1999. Both systems will be implemented into the production environment before the deadline of March 31, 1999.

With this agreement in place, all HUD systems, large and small, mission-critical and non-mission-critical, will now be certified Year 2000 compliant by January 31, 1999.

c. Provide a description of progress in fixing non-mission-critical systems, including measures that demonstrate that progress.

RESPONSE: As stated previously, HUD is confident that all of its systems, mission-critical and non-mission-critical, will be made compliant well in advance of the next century. That is, renovation will be complete by September 30, 1998; certification by January 31, 1999; and implementation by March 31, 1999. There is nothing to indicate that HUD will not make this schedule.

The chart below reflects HUD s progress on non-mission-critical systems that are being repaired. As this milestone breakdown reveals, only one (1) non-mission-critical system has yet to complete renovation, and only eight (8) systems remain to be certified.

	Total Number of Non-Mission-Critical HUD IT Systems Being Repaired	Assessment	Renovation	Certification (Validation)	Implementation
Milestones		June 1997 3rd Qtr FY 1997	Sept. 30, 1998 4th Qtr FY 1998	Jan. 31, 1999 2nd Qtr FY 1999	March 31, 1999 2nd Qtr FY 1999
Current Number Complete	39	39	38	31	26

The next chart demonstrates the status of HUD s entire system inventory, which is how the Department measures its own progress. This is followed by a breakdown of the total inventory into mission-critical and non-mission-critical systems.

All HUD IT Systems as of July 31, 1998	Total	Certified	Balance
Applications in Inventory	208		
Phasing out	37	2	
Requiring Certification	171	131	40
To Be Renovated	79	54	25
Built or Being Built Compliant	92	77	15
Subtotal	*171*	*131*	*40*
Mission-Critical Systems			
To Be Renovated	40	23	17
Built or Being Built Compliant	27	21	6
Subtotal	*67*	*44*	*23*
Non-Mission-Critical Systems			
To Be Renovated	39	31	8
Built or Being Built Compliant	65	56	9
Subtotal	*104*	*87*	*17*
TOTAL	**171**	**131**	**40**

As these charts reveal, HUD has now completed **89%** of the Year 2000 renovation work on its entire inventory, a **23%** increase over the last reporting period. Certifications have risen **21%**, meaning that currently **68%** of the inventory is now Year 2000 compliant. Additionally, over half of HUD s systems, **53%**, have now been implemented into a compliant production environment, operating with Year 2000 compliant code.

The total number of HUD s application inventory increased by one system during this reporting period. FHA Connection (FHAC), system code F17C, went into production in March 1998, and was added to the Status 2000 database in July 1998. FHAC was added to the inventory under the disposition of Being Built Compliant. The system is currently undergoing certification testing, and is expected to be certified Year 2000 compliant by December 18, 1998.

The dispositions of two (2) non-mission-critical systems were also changed during this reporting period. The Departmental Directives Management Information System (DDMIS), system code A60, and the Furniture and Equipment Management Information System (FEMIS), system code A63, had their dispositions changed, with HUD management approval, from To Be Renovated to Phase Out With Replacement. This disposition shift reduces the total number of renovating non-mission-critical systems from 41 to 39.

All HUD systems, large and small, mission-critical and non-mission-critical, will be certified Year 2000 compliant by January 31, 1999.

d. Provide a description of the status of efforts to inventory all data exchanges with outside entities and the method for assuring that those organizations will be or have been contacted, particularly State governments. Provide a description of progress on making data exchanges compliant.

RESPONSE: HUD has compiled a data exchange inventory, from which a comprehensive program of awareness and a plan for end-to-end testing have been developed to ensure that external data exchanges will not fail in the Year 2000.

Inventory

HUD has identified an exhaustive list of data exchange business partners—approximately 84,000 institutions and individuals—who interface with the Department through 34 different systems. This inventory was assembled in response to concerns and encouragement from OMB, the General Accounting Office (GAO), the Chief Information Officer (CIO) Council Committee on Year 2000, and the Chairman of the President's Council on Year 2000 Conversion, Mr. John Koskinen.

The specific data exchanges with States have been compiled, posted on HUD's Year 2000 Web site, and sent to the General Services Administration (GSA) on July 24, 1998, for posting to the GSA State Data Exchange Web site.

HUD is making its date formats available on its Internet site. Business partners may access the format information at www.hud.gov/cio/year2000/. Included with the date formats are the names and telephone numbers of program area points of contact, who

know the applications from a business perspective. Also included, where appropriate, are schedules for temporary bridges and/or when individual system end-to-end testing is being proposed.

Awareness
In an effort to reach these partners, HUD issued a Business Partner information letter, signed by Acting Deputy Secretary Saul N. Ramirez, Jr. The letter informs the partners of HUD's plans for the renovation, certification, and implementation of applications modified for the Year 2000, and directs them to HUD's Year 2000 Home Page for more specific and current data on the data exchanges. The letter has reached mortgage companies, banks, housing authorities, and the State entities that exchange data with HUD. The letter has also reached life insurance companies, retirement fund administrators, grantees, owner/agents of Section 8 properties, contract administrators, property developers and sponsors.

In addition, HUD is conducting an extensive outreach program, led by Chief Information Officer Gloria Parker, to profile the housing sector of the United States economy. The Department of Agriculture, the Department of Defense, and the Department of Veteran's Affairs are participating in this working group. This profile will ensure a comprehensive assessment of the housing sector's Year 2000 readiness. It will also enable rapid response should disruption occur.

Testing
The Department's testing efforts mimic HUD's standard systems development approach. Initially, HUD is performing unit and system testing at the computer application level and affirming that the revised format is successfully accepted or created by the application system. Often, end-user exchange partners are engaged in these tests, though their level of involvement in the process varies depending on the nature of the application.

By March 31, 1999, all HUD systems will have been certified Year 2000 compliant and implemented into the production environment. At that point, every end-user data exchange partner will be exchanging data in production via Year 2000 compliant application software. In February 1999, HUD will perform forward date end-to-end testing of these data exchanges with its business partners.

e. Provide a description of efforts to address the year 2000 problem in other areas, including biomedical and laboratory equipment, and any other products or devices using embedded chips.

RESPONSE: In the area of embedded microchips, a **component class** is defined by functionality (all devices in the group function similarly), *and* by the sharing of a distinct microchip problem and solution to that problem. For example: all the pagers in HUD's inventory are functionally similar and have the same microchip problem/solution. They therefore comprise one component class. On the other hand, though HUD's four voice mail systems function similarly, they have four distinct microchip problems/solutions, and therefore comprise four component classes.

The Department has previously reported a total inventory of thirty (30) component classes related to building facilities and services. However, since the May report, it was discovered that two systems, the TMS Preventive Maintenance System and the Bar Code System, each accounting for its own component class, were being reported in both the facilities and the IT systems inventories. Since it was decided that work on these components will be counted as part of the IT systems effort, they have been removed from the facilities inventory. This reduced the base inventory from 30 to 28. Research

determined that the Department's postage machines belong to 2 separate component classes rather than 1, causing the base to increase from 28 to 29.

As of July 31, 1998, 19 of the 29 component classes are now Year 2000 compliant. During this reporting period, the software was upgraded for one of the remaining voice mail systems, making all but one HUD voice mail system Year 2000 compliant. A significant upgrade in September will bring all voice telecommunications into compliance. All of the remaining components in the inventory have an action plan and a committed date by which compliance will be achieved. (See the chart "Embedded Microchip Compliance Schedule" and a listing of component classes in the response to question **II.f**.)

f. Provide a description of efforts to address the year 2000 problem for buildings that your agency owns or manages. If your buildings are owned or managed by GSA, you do not have to report on those buildings. Please indicate instead, whether or not you are a member of the Building Systems Working Group of the Year 2000 Subcommittee of the CIO Council.

RESPONSE: HUD is responsible for facilities management of the HUD headquarters building at 451 7th Street, SW, Washington, DC. All other buildings HUD occupies are managed by the General Services Administration (GSA). HUD is a member of the Building Systems Subcommittee of the CIO Council Committee on Year 2000.

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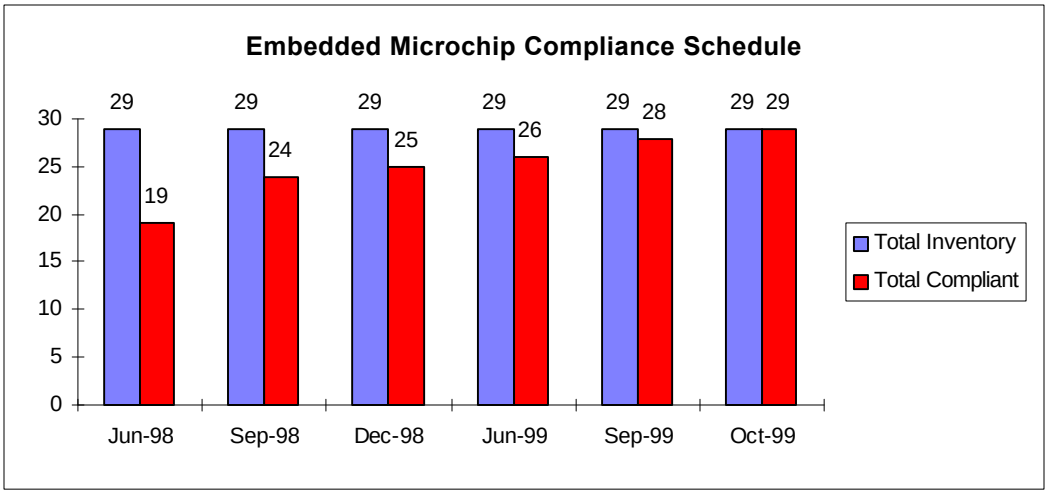
The chart below illustrates the current status of embedded microchip compliance and the key dates when the remaining elements will be made compliant. Accompanying the chart is a listing of the 29 items in the inventory of component classes.



Items in the Inventory of Component Classes

- Phone Systems (2)
- Voice Response Systems (3 groups)
- Pagers
- Parking Garage
- Postage Machines (2)
- Print Server
- Visual Arts Software
- Security Phones
- Records/Retention
- Facsimiles (2 groups)
- Voice Mail (4 groups)
- Motor Pool (2 cars)
- Office Safety
- Conveyors
- Copiers (4 groups)
- Library System
- Elevators

g. Provide a description of efforts to address the year 2000 problem in the telecommunications systems that your agency owns or manages. If your systems are owned or managed by GSA, you do not have to report on those systems. Please indicate instead whether or not you are a member of the Year 2000 Subcommittee of the CIO Council.

RESPONSE: The Department has developed a Year 2000 Telecommunications Program to ensure that HUD's telecommunication systems, like its application systems, will be fully functional before, during and after the Year 2000.

HUD's inventory is broken out by high level categories called sub-systems. Currently, 249 out of 271 sub-systems are compliant. The following matrix summarizes HUD's current status based upon these sub-systems:

Description of Sub-System	Assessed	Upgrading	Compliant	Total

EDI	17	0	17	17
File Servers	62	2	60	62
Internet	55	2	53	55
LAN	49	12	37	49
WAN	71	6	65	71
Video Conferencing	17	0	17	17
TOTAL:	***271***	***22***	***249***	***271***

In addition to the progress noted above, the Department can also report that all components of HUD's telecommunications links with the Treasury Department and the Social Security Administration, as well as all the components of the HUD Television Network, are now fully Year 2000 compliant.

Team 2000 members and HUD telecommunication managers participate in CIO Council Committee on Year 2000, GSA Telecommunications Subcommittee meetings, work groups, and sponsored forums. GSA has provided the Department with guidelines for testing and contingency planning. In turn, HUD is sharing information on its activities and test experience with the GSA subcommittee.

h. Provide a description of the status of the year 2000 readiness of each government-wide system operated by your agency (e.g., GSA will report on FTS 2000).

RESPONSE: The only government-wide system that the Department operates is the Credit Alert Interactive Voice Response System (CAIVRS). CAIVRS provides information on whether or not a borrower (or co-borrower) is currently in default or has had a claim on an FHA mortgage within the last three years. The other federal agencies using CAIVRS are the Department of Agriculture, the Department of Veterans Affairs, the Small Business Administration, the Department of Education, and the Department of Justice.

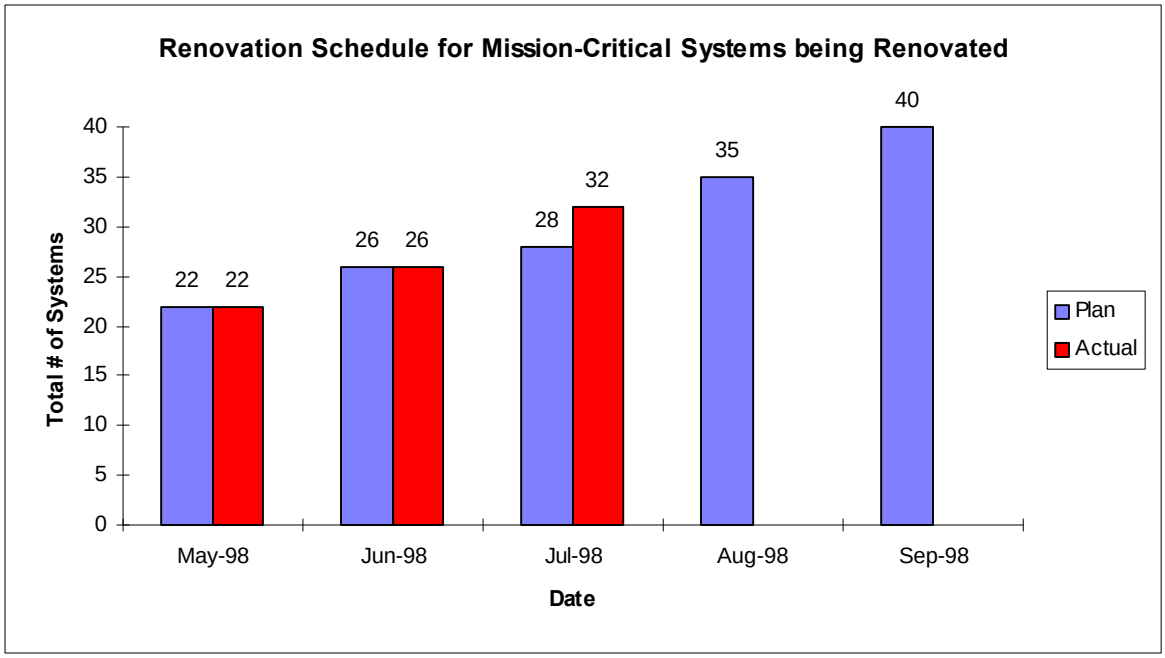
CAIVRS completed renovation on February 18, 1998, and finished system testing on April 5. It was certified Year 2000 compliant on April 24, and was implemented into the production environment on May 5, 1998, two months ahead of schedule.

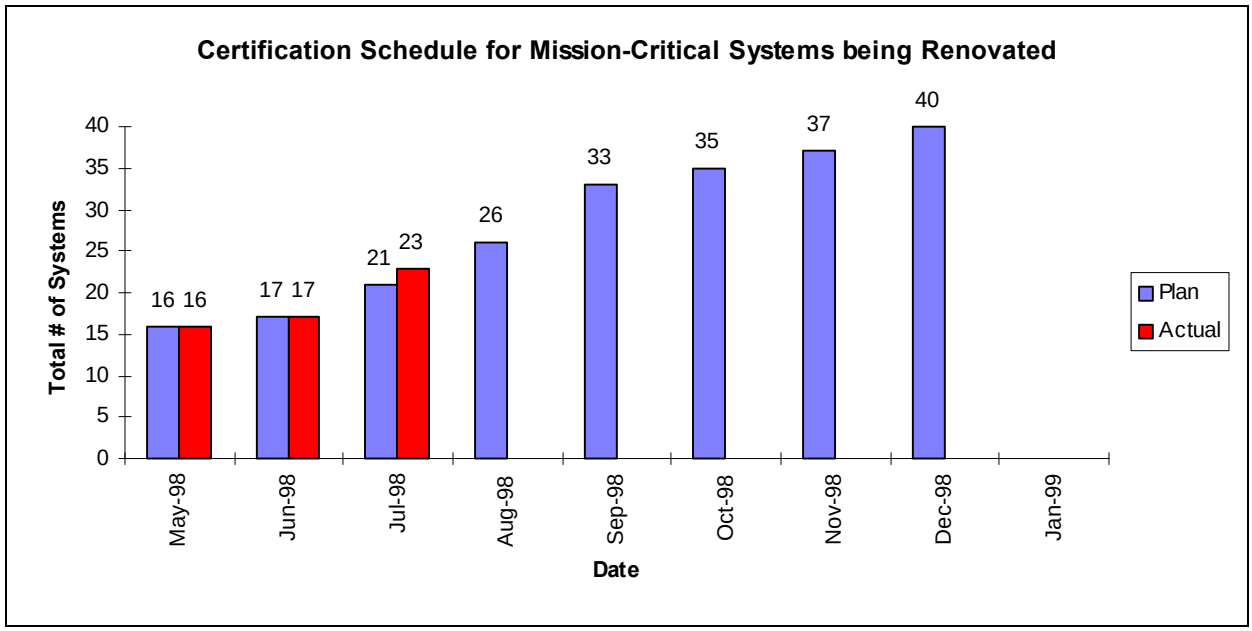
i. Please include any additional information that demonstrates your agency s progress. This could include charts or graphs indicating actual progress against your agency s schedule, lists of mission-critical systems with schedules, success stories, or other presentations.

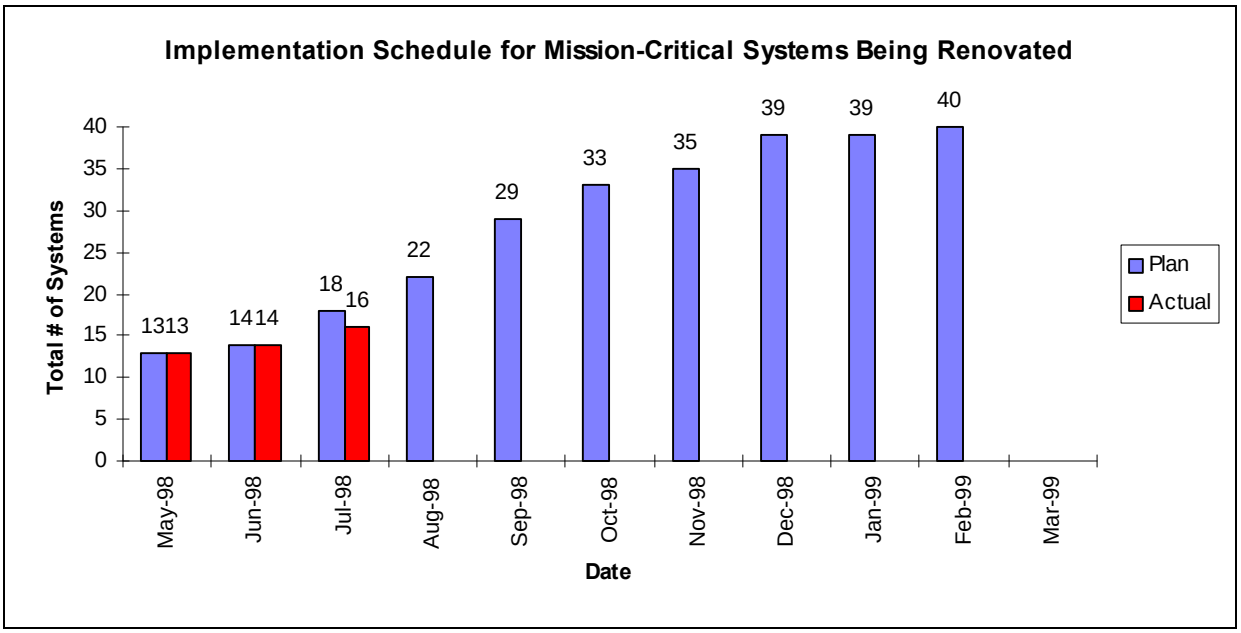
RESPONSE:

Progress on Mission-Critical Systems Being Repaired

The following three charts demonstrate HUD's progress on the renovation, certification, and implementation of mission-critical systems that are being repaired. The numbers reflect the disposition changes detailed in the response to questions **I** and **II.a**. The milestones are consistent with OMB deadlines for each phase.


Renovation Schedule for Mission-Critical Systems being Renovated
Total # of Systems
0
5
10
15
20
25
30
35
40
22 22
26 26
28 32
35
40
May-98
Jun-98
Jul-98
Aug-98
Sep-98
Date
Plan
Actual


Certification Schedule for Mission-Critical Systems being Renovated
Total # of Systems
0
5
10
15
20
25
30
35
40
16 16
17 17
21 23
26
33
35
37
40
May-98
Jun-98
Jul-98
Aug-98
Sep-98
Oct-98
Nov-98
Dec-98
Jan-99
Date
Plan
Actual



Applications Completed Ahead of Schedule

The following tables contain the names of systems which have completed renovation and certification ahead of schedule as of July 30, 1998.

Renovation Completed Early

System Name	Estimated Completion Date	Actual Completion Date	Days Early
B01 Issuer Management System	6/30/98	1/1/98	180
D43 Pers. Computer Time & Attendance Remote Entry	7/17/98	2/4/98	163
Z13 Burke Overall Tables	6/30/98	1/30/98	151
T25 American Housing Survey	6/30/98	1/30/98	151
B16 Macola Accounting Software System	6/30/98	2/14/98	136
D51 Departmental Organization Code System	3/23/98	11/17/97	126
D08 Bond Payment	1/21/98	9/24/97	119
D19 Training Announcemnt/Nominatn & Confirm. Sys.	7/17/98	4/10/98	98
D17 Project and Resource Management System	6/30/98	3/30/98	92
C02 Youthbuild	8/1/98	5/28/98	65
D84A Directives Clearance System	7/21/98	5/25/98	57
A96 Program Accounting	9/4/98	7/15/98	51

N31 PIH Integrated Business System	8/7/98	6/26/98	42
D59 Employee Express	5/30/98	4/24/98	36
A51 Federal Assistance Awards Data	4/17/98	3/15/98	33
D65A Section 8 Outlay Forecasting System	6/30/98	5/28/98	33
F42 Consolidated Single Family Statistical System	4/30/98	4/1/98	29
C47 Home Investment Partnership Act (HOME)	10/31/97	10/3/97	28
D04 Administrative Client Request Response System	12/24/97	11/28/97	26
D02 Resource Management Information System	11/30/97	11/6/97	24
F51B Mortgagee Performance & Analysis System	3/6/98	2/17/98	17
A80G Multifamily Mortgage Auction Subsystem	8/5/98	7/21/98	15
A50 Problem Tracking and Reporting System	6/30/98	6/19/98	11
A91 Consolidated Cost and FTE Files	1/31/98	1/21/98	10
A49 National Credit Bureau Referral System	4/20/98	4/10/98	10
Z90 Tribal Grants Tracking System	3/29/98	3/20/98	9
B20 New Issuer System	7/31/98	7/22/98	9
F72 Title I Insurance and Claims	8/6/98	7/28/98	9
E04 Section 3 Complaint Tracking System	10/15/97	10/10/97	5
A80S Single Family Acquired Asset Management Sys.	6/5/98	6/5/98	3
D21 Deptmntl Accounts Receivable Tracking/Collection	3/2/98	2/27/98	3
A15 Geographic Code System	2/16/98	2/13/98	3
A73 Inventory of Automated Systems	4/30/98	4/27/98	3
A13 OPS Management Information	2/27/98	2/24/98	3
B09 Default Management System	7/31/98	7/28/98	3
U05 Biller Resource Accounting System	10/24/97	10/22/97	2
D53 Merit Staffing Control System	1/16/98	1/14/98	2
B17 Maintenance System	6/15/98	6/13/98	2
A65A Section 235 Automated Validating and Editing	5/21/98	5/20/98	1

Certification Completed Early

System Name	Estimated Completion	Actual Completion	Days

	Date	Date	Early
D61 EZBudget	4/30/98	9/12/98	230
B16 Macola Accounting Software System	7/16/98	2/17/98	149
D51 Departmental Organization Code System	6/5/98	1/16/98	140
D19 Training Annoucemnt/Nominatn & Confirmatn	8/28/98	4/22/98	128
G16A Inspector General Audit System	4/30/98	1/6/98	114
D43 Personal Computer Time & Attend. Remote Entry	9/7/98	5/19/98	111
C38 Homeless Assistance Mgmt. Information System	5/29/98	2/11/98	107
F39 Technical Suitability of Products Tracking System	11/21/97	8/7/97	106
F20 Directives Logging/Tracking/Reporting	11/21/97	8/7/97	106
D84A Directives Clearance System	9/18/98	6/22/98	88
G14 Audit Support Investigation System for OIG	1/15/98	10/21/97	86
N29 Client Information System	9/21/98	6/29/98	84
A35 HUD Procurement System	12/27/97	10/17/97	71
Z90 Tribal Grants Tracking System	6/30/98	4/23/98	68
C07A CPD Grants Management Process	12/19/97	10/14/97	66
U05 Biller Resource Accounting System	1/2/98	10/31/97	63
D58 Benefits Service System	11/30/97	10/1/97	60
D08 Bond Payment	2/16/98	12/18/97	60
D04 Administrative Client Request Response System	3/31/98	1/30/98	60
A80N Single Family Mortgage Notes Subsystem	9/17/98	7/23/98	56
C04 CPD Integrated Disbursement & Information Sys.	2/13/98	12/19/97	56
A91 Consolidated Cost & FTE Files	4/30/98	3/6/98	55
E64 Correspondence Tracking System	1/14/98	11/21/97	54
D55 EEO Management Analysis System	6/30/98	5/8/98	53
A51 Federal Assistance Award Data	6/19/98	4/28/98	52
J05A Legal Assessment of Workload System	1/2/98	11/20/97	43
F87 Tenant Rental Assistance Certification System	8/25/98	7/15/98	41
F42 Consolidated Single Family Statistical System	6/5/98	4/27/98	39
D59 Employee Express	7/14/98	6/8/98	36
B01 Issuer Management System	2/18/98	1/15/98	34
D02 Resource Management Information System	1/12/98	12/12/97	31
B20 New Issuer System	8/28/98	7/28/98	31
D17 Project and Resource Management System	7/23/98	6/23/98	30
D60 Personnel Information System	11/13/97	10/15/97	29

A87 Space Assignment Inventory System	2/23/98	1/27/98	27
F17B Case Binder Tracking System	2/17/98	1/22/98	26
D50A Scheduall	3/31/98	3/6/98	25
D66A Sexual Harassment Online Training	12/15/97	11/21/97	24
A65 Subsidized Housing Accounting System	12/31/97	12/8/97	23
E04 Section 3 Compliant Tracking System	11/28/97	11/5/97	23
D21 Deptmntl Accts Receivable Tracking/Collection	4/16/98	3/24/98	23
D48 Transit Subsidy Program	7/20/98	6/29/98	21
A13 OPS Management Information	4/20/98	3/30/98	21
D49 HCM (Formerly, Intergovernmental Comm. Sys.)	3/30/98	3/9/98	21
N03 Public Housing Development Cost Limits	10/14/97	9/24/97	20
C39 Empowerment Zones/Enterprise Communities	12/29/97	12/9/97	20
D53 Merit Staffing Control System	2/10/98	1/22/98	19
C01 CDBG Indian Program	4/7/98	3/19/98	19
A39 HUD's Consolidated Financial Reporting System	10/5/97	9/16/97	19
B17 Maintenance System	7/6/98	6/18/98	18
A36 Parking Control System	3/6/98	2/17/98	17
A21 Loan Accounting System	9/1/97	8/15/97	17
C04A Performance Mapping Module	7/31/98	7/16/98	15
F24A Development Application Processing	6/30/98	6/15/98	15
A62 Locator System	4/29/98	4/14/98	15
T18 Multifamily Inquiry	9/30/97	9/16/97	14
C08 Disaster Recovery Grant Reporting	3/26/98	3/16/98	10
D56 Automated Retirement Forms System	10/6/97	9/26/97	10
Z89 HOPE IV	6/26/98	6/16/98	10
U21 Automated Scheduling System	6/1/98	5/22/98	10
D72 Human Resources Action Tracking System	11/1/97	10/23/97	9
C39B EZ/EC Locator	7/24/98	7/16/98	8
J03 Office of Program Enforcement Tracking System	12/31/97	12/23/97	8
R25 FHA Contract Tracking System	8/15/97	8/7/97	8
F94A Multifamily Document Management System	11/21/97	11/13/97	8
D05 OHR Office of Personnel & Training Inquiry Sys.	2/6/98	1/30/98	7
A73 Inventory of Automated Systems	6/30/98	6/23/98	7
D72P Human Resources Action Tracking System	5/5/98	4/28/98	7
B02 Issuer Portfolio Analysis Database System	7/16/98	7/9/98	7

U24 HUD Sprint Telemail System	2/27/98	2/20/98	7
B15 Check Record Issuance System	2/12/98	2/6/98	6
H05 Automated Corresp. On-Line Response Network	3/23/98	3/19/98	4
F37A Staff Profile Information & Res. Utilztn. Tracking	6/26/98	6/22/98	4
F24R Risk Assessment Management System	10/9/97	10/6/97	3
A75 HUDCAPS/FFS	7/31/98	7/28/98	3
A16 Transaction Reconciliation System	3/25/98	3/23/98	2
A49 National Credit Bureau Referral System	7/31/98	7/29/98	2
G62 Oasis Ad-Hoc Reporting - Impromptu	11/28/97	11/26/97	2
G64A Operation Safehome	7/21/98	7/20/98	1
D64A Single Family Housing Enterprise Data	4/10/98	4/9/98	1
D63 Needs Assessment Survey	10/31/97	10/30/97	1

Outreach to Business Partners and HUD Field Offices

HUD continues to provide information on Year 2000 issues and solutions to business partners, Department personnel, and local, State, and Federal officials:

- Team 2000 members gave Year 2000 awareness presentations to gatherings of local and State Public Housing Authorities, and Tribally Designated Housing Entities in Denver, Atlanta, Fort Worth, New York, Miami, Chicago, and Washington, DC.
- Team 2000 staff members met with HUD field office personnel and program area representatives in Denver, Atlanta, Fort Worth, and Chicago to inform them of Year 2000 procedures as they relate to the field offices, and to conduct training on how to carry out readiness evaluations, and how to use the Status 2000 database.
- Ms. Woodside gave a presentation on Year 2000 awareness at the Access America Conference as part of their National Partnership for Reinventing Government initiative. Attendees included representatives from county governments. The presentation was given on June 15, 1998, in Ft. Lauderdale, FL.
- Team 2000 delivered a presentation at the Information Technology Support Center (ITSC) Year 2000 Contingency Planning workshop, July 1, 1998, in Washington, DC. The ITSC is a collaboration of state employment security agencies, the Department of Labor, and private sector partners, dedicated to advancing the appropriate application of information technology. States may adopt this information to provide more accurate, efficient, cost effective, and timely service for unemployment insurance customers. Team 2000's presentation summarized HUD's experiences in the contingency planning process for Year 2000.

III. Verification Efforts.

a. Describe how and to what extent internal performance reports (i.e., compliance of systems repaired and replaced) are independently verified. Provide a brief description of activities to assure independent verification that systems are fixed and to assure that

information reported is accurate. Also, identify who is providing verification services (i.e., Inspectors General or contractors).

RESPONSE: The Department retained PricewaterhouseCoopers LLP (PwC) to provide independent verification and validation services to assist HUD management with the Year 2000 Project. The primary objective of PwC is the identification of potential risks associated with the Department's Year 2000 compliance effort.

Among the tasks being performed are:

- assessment of HUD's Year 2000 Project processes and results to-date
- review of certification test strategies, plans, and results
- review of business partner Year 2000 awareness and readiness
- assessment of HUD's business process continuity and contingency plans.

PwC presented their conclusions on July 28, 1998. The Department will be analyzing these findings and taking corrective actions over the next few months, and will report them to OMB in the November 1998 Quarterly Report.

HUD's Year 2000 Project is also being audited by the Department's Office of Inspector General (OIG). The audit has three phases: project approach and management, application system plans, and certification testing process. The first phase was completed in late May 1998. The second phase is due in August 1998. The third phase due date has not yet been determined.

IV. Organizational Responsibilities.

a. Describe how your Department/Agency is organized to track progress in addressing the year 2000 problem. (If you have provided this information in the past, only provide it again where it has changed.) Include in your description the following:

1. Describe the responsible organizations for addressing the Year 2000 problem within your Department/Agency and provide an organization chart.

RESPONSE: HUD's organizational structure for Year 2000 activities has been in place since June 1996, when the Year 2000 Project Office (Team 2000) was established. Below is a listing of HUD's key Year 2000 personnel during this reporting period:

- Saul N. Ramirez, Jr., Acting Deputy Secretary
- Gloria R. Parker, Chief Information Officer
- Leslie H. Graham, Jr., Deputy Director, Office of Information Technology
- George L. Suggs, Acting Director, Systems Engineering Group
- Pamela Woodside, Team 2000 Project Manager
- Three Development Directors:
  James R. Beall, Director, Housing Systems Division
  Carolyn H. Cockrell, Director, Departmental Systems Division

Michael J. Cunningham, Director, Administrative Systems Division.

As CIO, Ms. Parker has the primary responsibility for ensuring that all elements which support the business operations of HUD—IT systems and non-IT facilities and services—remain fully functional before, during, and after the Year 2000.

The CIO's most immediate support in the Year 2000 organization comes from Mr. Graham and Mr. Suggs, who manage the resources necessary to make the corrections for Year 2000, and from Ms. Woodside, who, as Team 2000 Project Manager, has the day-to-day responsibility of tracking and reporting the progress of those corrections.

The three development directors, Mr. Beall, Ms. Cockrell, and Mr. Cunningham, working under Mr. Suggs, are specifically responsible for the code renovation and testing of IT systems. Certification (validation) of the renovated code is the direct responsibility of Ms. Woodside and Team 2000.

Year 2000 corrections involving non-IT systems, telecommunications, and other facilities are being handled by the HUD personnel who are specifically in charge of those areas, with guidance and direction from the CIO and Ms. Woodside.

Mr. Ramirez, as Acting Deputy Secretary, is responsible for Year 2000 awareness and priorities at the highest Departmental level. He is kept informed of Year 2000 progress and issues on a continual basis by the CIO. The CIO also presents monthly Year 2000 status updates to HUD Secretary Andrew Cuomo at the Technology Investment Board Executive Committee meetings.

2. Describe your Department/Agency s processes for assuring internal accountability of the responsible organizations. Indicate how frequently the agency head or Chief Operating Office is briefed on year 2000 progress. Include any quantitative measures used to track performance and other methods to determine whether the responsible organizations are performing according to plan. Include a discussion of the oversight mechanism(s) used to assure that replacement systems are on schedule.

RESPONSE: HUD's process for assuring internal accountability of the responsible organizations is accomplished by use of a HUDwide, Integrated Implementation Plan (IIP), a project management tool, which facilitates weekly status reviews at the working level. The plan and status are continually reviewed by the Team 2000 Project Manager where risk is assessed and corrective action initiated. Higher level management oversight is provided to the Year 2000 project on a weekly, monthly, and quarterly basis by Ms. Parker, Mr. Graham, and Mr. Suggs. Ms. Parker provides regular updates on the Year 2000 project to the Technology Investment Board Executive Committee which is chaired by the Secretary and comprised of his Principal Staff.

Internal Metrics and Status Mechanisms (Step by Step)

(1) The project leaders/coordinators of the system development teams maintain and update system schedules in the Status 2000 database.

(2) Status 2000, a Lotus Notes database, is the source of Year 2000 Project Manager/Team 2000 review and inventory metrics. It provides an automated update to the IIP. The IIP gives an understanding of system schedules from a Departmental perspective.

(3) Team 2000 verifies the IIP data, and from it, produces a weekly internal report called the IIP Status Report which consists of three sections:

- The Red Light section lists systems which have not completed the assigned tasks towards Year 2000 compliance by the estimated completion date(s). Listed in this section are the system and the task that is late, the estimated date of completion, how many calendar days the system is now behind, and the reason for the slippage.
- The Yellow Light section identifies systems which have extended their estimated date of completion for specific tasks so that management is alerted to the schedule change and is prepared for the possibility that some assistance or corrective action may be necessary in the near future. In this section, the system and the task with the revised completion date are listed, along with the original completion date and the reason for the extension of time.
- The Green Light section lists the number of applications that are currently certified as Year 2000 compliant and the number of systems that are progressing on schedule towards Year 2000 compliance.

The IIP Status Report is a management tool for Mr. Suggs and the three development directors, who use it to determine where to channel the extra assistance and resources necessary to bring the highlighted systems back on schedule. The report is distributed to the CIO and the OIG.

Replacement Systems

The Department recognizes the scheduling complexity in situations where a system is to be replaced by another system and then retired. HUD's existing tracking mechanisms provide methods of monitoring those situations so that the replacing systems are completed on-schedule and are certified Year 2000 compliant.

When a system is classified with the disposition "To Be Phased Out With Replacement," the Status 2000 database collects information on the replacing system; its schedule for development, certification, and implementation; and the date the retiring system will be taken out of production. This information subsequently appears in both the IIP and in the IIP Status Reports so that management can readily foresee any scheduling problems which might arise with replacing/retiring systems and institute the necessary corrective actions.

These corrective actions include a contingency plan, specific to systems being replaced, that is triggered by a date in the tracking mechanisms. This date, referred to internally as the "Point of No Return" date, appears in Status 2000 as the "Last Date that a Contingency Plan could be Started and Successfully Completed." Such a date was determined for each replacement situation during the Application Analysis Phase of the Year 2000 Project Plan. It is based on the estimated failure date of the system being replaced in relation to the time necessary to successfully complete the contingency plan, which is the renovation of the existing system.

Examples of how the Point of No Return date works: Prior to application analysis, the Home Investment Partnership Act (HOME), system code C47, was slated to be replaced by a newer version that was being built compliant. However, from the "Point of No Return" date produced in the analysis, it was immediately apparent to management that the replacement version could never be completed in time. The contingency plan was put into effect. HOME

renovation was completed on October 3, 1997, and the system was certified Year 2000 compliant on February 25, 1998.

A second example is the Program Accounting System (PAS), system code A96. PAS is a large, mission-critical application that was also scheduled to be replaced with a new, compliant version. As a financial system, PAS would actually reach its estimated system failure date on October 1, 1999, the beginning of Fiscal Year 2000. When the "point of no return" date was reached for PAS, management determined that the replacement system would not be completed, certified, and implemented before that failure date. The contingency plan was then put into effect, and PAS was reclassified as "To Be Renovated." PAS renovation was completed on July 15, 1998. It is scheduled to be certified by December 30, 1998.

All replacing systems will be certified Year 2000 compliant by January 31, 1999, and will be implemented by March 31, 1999.

3. Describe the management actions taken and by whom, when a responsible organization falls behind schedule.

RESPONSE: The management actions taken when a responsible organization falls behind schedule occur at several levels in HUD. At the top level, the CIO provides Department-wide leadership and management oversight of the Year 2000 Project, ensuring that immediate and appropriate actions are taken. At the next level, Mr. Graham and Mr. Suggs provide qualitative management oversight for the overall budget and the integrated implementation of Year 2000 efforts. To ensure these efforts are accomplished in an effective manner, Mr. Suggs, with guidance from the Team 2000 Project Office, monitors and holds the three development directors accountable for their specific commitments and schedule achievement.

Ms. Woodside provides leadership, oversight, and qualitative reviews of plans and progress, and quickly refocuses resources on any issue threatening the Year 2000 Project's success. The Team 2000 Project Office monitors project status on a weekly basis, and if an organization falls behind schedule, brings the issue(s) to the immediate attention of the development director(s) for action. The directors, in turn, identify any issues impeding their progress to Ms. Woodside and Mr. Suggs.

Finally, the three development directors have direct authority over the software renovation teams, guiding their achievements in accordance with Team 2000 goals and managing performance at the line level. The directors are accountable for establishing and achieving the individual application schedules. Weekly status reporting and milestone achievement reporting have been established to ensure management actions are taken to address problems quickly.

An example of how this structure works: In late March, it became apparent to Team 2000 and Ms. Woodside, through weekly status reports, that renovation work on five of the Department's largest systems—all of which are mission-critical and complex in structure—was not proceeding at a pace necessary to meet the scheduled renovation completion dates for those systems. Conversations with the three development directors revealed that renovation teams were having to spend a great deal of their time conducting other development work on the systems which was competing with Year 2000 renovation. The issue was brought to the attention of Mr. Suggs and Mr. Graham, and as a result, Mr.

Graham suspended all development work other than Year 2000 renovation on the five systems in question in a letter to the program area Assistant Secretaries, effective April 1, 1998. That action has allowed the development teams to apply their energies and resources exclusively toward making their systems Year 2000 compliant, which in turn is bringing those systems back on track for achieving the renovation and compliance goals on schedule.

V. Continuity of Business Plans

Describe your agency s approach to ensure continuity of your core business functions. Your discussion should also include schedules and milestones, and your high level core business functions. Agencies should use the GAO document, Year 2000 Computing Crisis: Business Continuity and Contingency Planning, (March 1998, currently in exposure draft), as a guide.

RESPONSE: In accordance with the GAO guidelines, HUD's Business Process Continuity Contingency Plan (BPCCP) was completed on June 30, 1998. A copy is included as an attachment to this report. The BPCCP is currently being approved by all Assistant Secretaries whose Program Areas are referenced in the plan. The BPCCP identifies possible risks and/or threats due to Year 2000 failures in HUD systems and non-HUD systems, as well as who would be affected by those failures.

Contingency plans will be prepared by September 30, 1998, that describe the steps HUD will take to ensure the continuity of the core business functions. These detailed plans will define temporary solutions to implement should a crisis situation result from the internal or external Year 2000-induced failures identified in the BPCCP. Testing of the contingency plans will occur in 1999. A business resumption team will be designated for each plan. These teams will test the contingency plans through either a desktop exercise or a simulation testing scenario. For further information, please refer to the attached master schedule with milestone dates provided.

HUD addresses four primary business functions in the BPCCP:

- Underwrite and Service Insurance;
- Administer Grants and Subsidies;
- Enforce Fair Housing and Equal Housing Opportunities; and
- Provide a Secondary Market for Government Insured and Guaranteed Loans.

HUD's most critical external dependencies may be classified under two general headings, major infrastructure failures and external business partners. Included in major infrastructure failures are water, electrical, or natural gas-generated power, and data and voice telecommunications. If these infrastructure failures occurred, HUD would be at risk through failures of security systems, environmental control, elevators, and telephone and fax line usage. Under the general heading of external business partners, HUD's most critical dependencies are with the Treasury Department, the Federal Reserve, and the banks with which HUD has a direct relationship.

VI. Exception Report on Systems.

Provide a brief status of work on each mission-critical system which is not year 2000 compliant that is either (1) being replaced and has fallen behind the agency s internal schedule by 2 months or more, or (2) being repaired and has fallen behind the agency s milestones by 2 months or more.

a. If this is the first time this system is reported, include:

1. **An explanation of why the effort to fix or replace the system has fallen behind and what is being done to bring the effort back on schedule.**

2. **The new schedule for replacement or completion of the remaining phases.**

3. **A description of the funding and other resources being devoted to completing the replacement or fixing the system.**

RESPONSE: As of July 31, 1998, no system had fallen behind by two months or more.

b. If this system has been previously reported and remains behind schedule include:

1. **An explanation of why the system remains behind schedule and what actions are being taken to mitigate the situation.**

2. **A summary of the contingency plan for performing the function supported by the system should the replacement or conversion effort not be completed on time.**

RESPONSE: As of July 31, 1998, no system had fallen behind by two months or more.

VII. Systems scheduled for implementation after March 1999.

Please include a list of those mission-critical systems where repair *or* replacement cannot be implemented by the March 1999 deadline. The list should include:

a. The title of the systems.

b. A brief description of what the system does

c. The reason that the system cannot be implemented by the deadline.

d. A summary of the contingency plan for performing the function supported by the system should the replacement or conversion effort not be completed on time. Indicate when the contingency plan would be triggered, and provide an assessment of the effect on agency operations should the system fail, including anticipated problems. If you do not yet have a contingency plan, indicate when it will be in place.

RESPONSE: All the Department's systems that are being repaired or that are replacing existing systems are scheduled to be implemented by March 1999.

VIII. Other Management Information.

a. On the first row, report your estimates of costs associated with year 2000 remediation, including both information technology costs[1], as well as costs associated with non-IT

[1] **Information Technology costs to be included are described in Section 43 of OMB Circular No. A-11. DOD should report obligational authority requirements for business and weapons systems.**

systems. Report totals in millions of dollars. (For amounts under $10 million report to tenths of a million.)

RESPONSE:

Fiscal Year	1996	1997	1998	1999	2000	Total
Current Cost Estimates	$0.7m*	$6.2m*	$21.8m*	$25.0m	$6.2m	$59.9m

***Actual Costs**

b. If there have been dramatic changes in cost, please explain.

RESPONSE: Since the May 1998 report, the cost for Year 2000 work in Fiscal Year 1998 has risen $2.4 million, from $19.4 to $21.8 million. This is now the actual cost figure for FY 1998. The cost estimate for FY 1999 has been revised upwards from $15 million to $25 million, an increase of $10 million. This increase is to cover additional Year 2000 related hardware and software upgrades, and Year 2000 contingency planning efforts. With these revisions, the total cost of the Department's Year 2000 effort is now estimated to be $59.9 million, an increase of $12.4 million over the May report.

c. If there have been significant changes to your agency s schedule, changes in the number of mission-critical systems, changes to the number of systems behind schedule, please explain.

RESPONSE: This is not applicable.

d. Are there any concerns with the availability of key personnel?

RESPONSE: No.

e. Are there any other problems affecting progress?

RESPONSE: No.